

Remarks

This is a supplement to the Response filed July 8, 2003 responding to the Office Action mailed on March 11, 2003, and in conjunction with the Request for Continued Examination filed herewith. Claims 11, 13, 15, 17, and 19 have been amended. No new matter has been added. Claims 1-20 are pending in the application. Reconsideration and allowance are respectfully requested in view of the amendments and remarks contained herein.

I. Interview

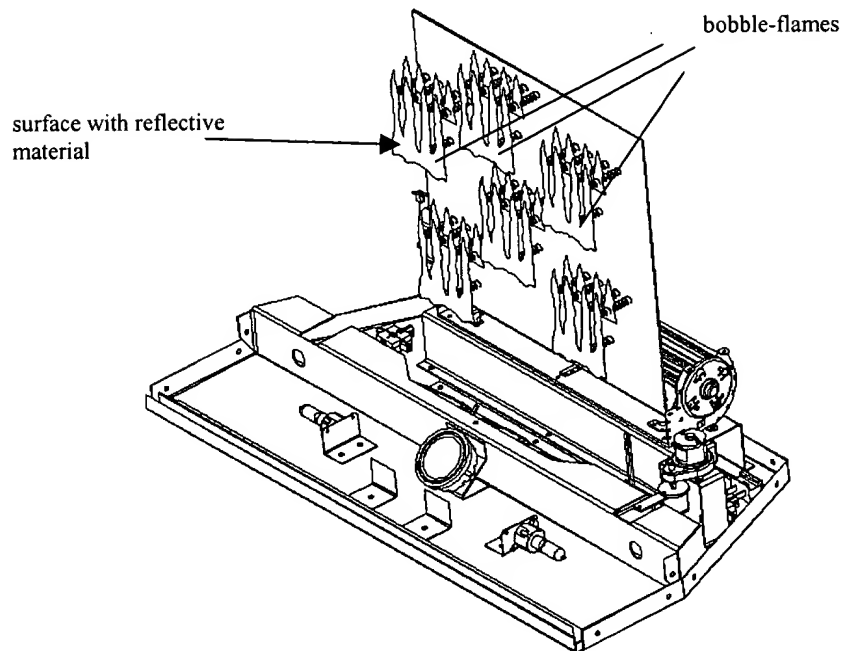
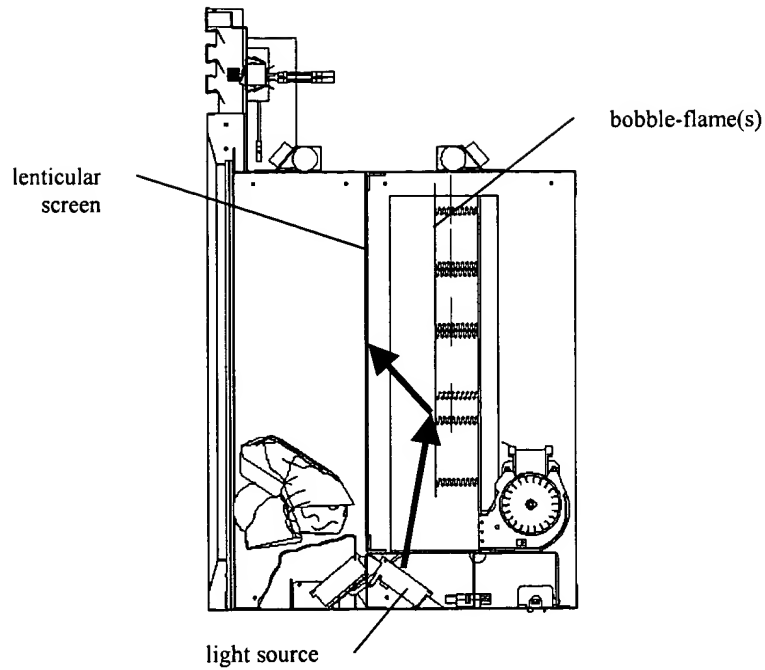
Applicants' representatives Matthew A. Doscotch (Reg. No. 48,957) and Robert A. Kalinsky (Reg. No. 50,471) appreciate the courtesy extended by the Examiner during the telephonic interview held on June 27, 2003. During the interview, claims 11, 14, and 15 were discussed in relation to Hess et al., United States Pat. No. 6,047,489, and claims 1-7, 12, 16, 18, and 19 were discussed in relation to Morton, United States Pat. No. 6,078,424. The remarks provided herein are consistent with the discussions held during the interview.

II. Claim Rejections under 35 U.S.C. § 102

In section 2 of the Office Action, claims 11, 14, and 15 were rejected as being anticipated by Hess et al., United States Pat. No. 6,047,489. This rejection is respectfully traversed.

Claim 11 is directed to a flame simulation apparatus for a fireplace. The apparatus recited by claim 11 includes, inter alia, a bobble-flame with a surface including a reflective material. Claim 11 further recites a light source to reflect light off of the reflective material on the surface of the bobble-flame and onto a back surface of a translucent screen to generate an image of a flickering flame effect that is viewable from the front surface of the translucent screen.

For example, in one non-limiting embodiment described in the present application, light from a light source 186 is reflected off of reflective material on a surface of a bobble-flame 182 and onto a lenticular screen 112. This reflection off of the surface of the bobble-flame 182 is shown by the arrows provided below in illustrations based substantially on Figures 3 and 8 of the application.

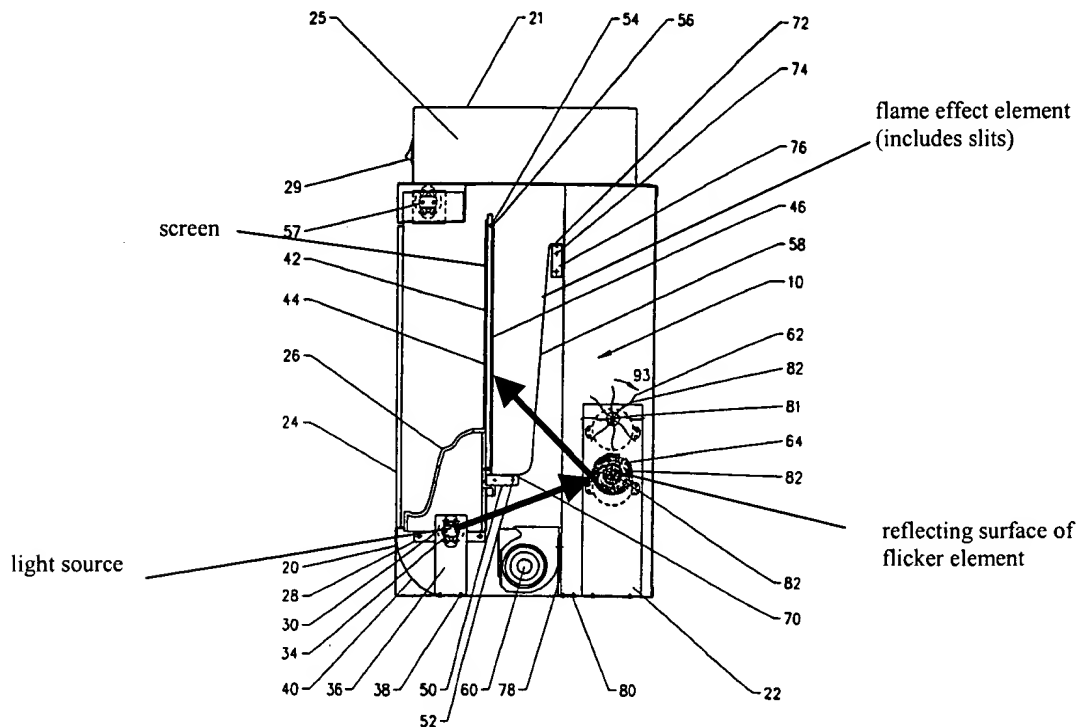


It is advantageous to configure a flame simulation apparatus as recited by claim 11 so that light reflected by the reflective material on the surface of the bobble-flame onto the screen can simulate natural flames. Application, page 11, lines 27-29.

Hess discloses a flame simulating assembly. Hess discloses use of light to simulate flames as follows.

In use, light is transmitted from the light source 30 through the slits 66 of the flame effect element 58 to the diffusing surface 46 of the screen 42. The flame effect element 58 billows in the airflow from the blower 60 to vary the position and size of the slits 66. The resulting effect is for the transmitted light to resemble flames licking from a fire. As will be explained further below, the transmitted light is at least partially colored due to its reflecting from a colored reflecting surface 82 of a flicker element 62, 64 prior to passing through the slits 66.

Hess, column 4, lines 54-63 (emphasis added). In other words, Hess discloses reflecting light from light source 30 off of reflecting surface 82 of flickering element 62 positioned in the back of the fireplace behind the flame effect element 58, through slits 66 of flame effect element 58, and onto screen 42. This configuration is best illustrated by Figure 3 of Hess, reprinted below, with relevant structural elements labeled and arrows added to indicate the path of light from the light source 30 to screen 42.



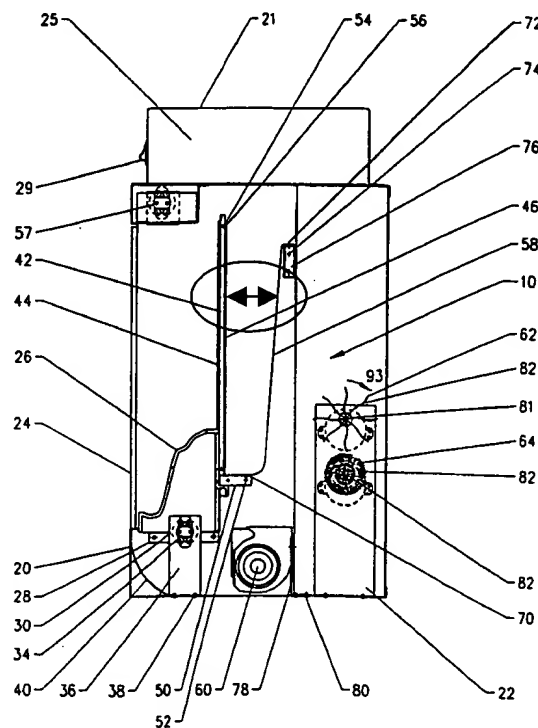
Hess, Figure 2 (emphasis added). Therefore, the flame effect on screen 42 is created as light that is reflected off of reflecting surface 82 of flickering element 62 passes through a plurality of slits

66 (see Figure 5 of Hess) that is cut into the flame effect element 58. Hess, column 4, lines 18-22.

Consequently, to create simulated flames, Hess discloses allowing light to pass through an element having slits 66 cut therein. Hess does not disclose or suggest a bobble-flame including a surface with reflective material, or a light source to reflect light off of the reflective material of the surface of the bobble-flame and onto a back surface of a translucent screen, as recited by claim 11.

The rejection apparently equates the slits 66 disclosed in Hess with the bobble-flame recited by claim 11. However, as noted above, the slits 66 of Hess allow light to pass through to screen 42, rather than reflecting light as recited by claim 11. Therefore, the slits 66 clearly are not a surface and do not include reflective material as recited by claim 11.

During the interview, the Examiner stated that all surfaces reflect light to some degree and thereby hypothesized that the flame effect element 58 would reflect light from the light source 30. Although this argument is not completely understood, it is believed that the Examiner is referring to the possible reflection of light between element 58 and screen 42, as illustrated by the arrowed line below.



Hess, Figure 2 (emphasis added). There are several reasons why interpreting Hess as suggesting reflection of light between element 58 and screen 42 as illustrated above is inaccurate.

First, Hess does not disclose such reflection of light. Hess only discloses reflection of light off of reflecting surface 82 of flicker element 62. As previously noted, light is passed through the slits 66 of element 58 to create the flame effect, rather than relying on reflection.

Second, assuming that reflection of light between element 58 and screen 42 would occur, such reflection would be undesirable because the result would result in the following situation: (i) light being is passed through the slits 66 of the element 58 and projected onto the screen 42 (creating a "positive" image of flames on screen 42); and (ii) light being reflected by a surface of element 58 onto the screen 42 (creating a "negative" or reverse image of flames on screen 42 because light would reflect off of all surfaces of element 58 except the slits 66). As can be seen, such a configuration would result in both a positive image of flames created by passed light as well as the reverse negative image of flames created by reflected light. This would produce at best a blurred image on the screen 42, and at worst no image at all, since the positive and negative images could cancel each other out.

For at least the reasons above, Hess fails to anticipate claim 11, as well as claim 14 that depends therefrom. Reconsideration and allowance are respectfully requested.

Claim 15, although not identical in scope to claim 11, includes limitations similar to those of claim 11 and should therefore be allowable for at least the same reasons as those provided above with respect to claim 11. Reconsideration and allowance are respectfully requested.

III. Claim Rejections under 35 U.S.C. § 103

In section 4 of the Office Action, claims 1-7, 12, 16, 18, and 19 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Hess in view of Morton, United States Pat. No. 6,078,424. This rejection is respectfully traversed.

Claim 1 is directed to a fireplace for simulating a natural fire. The fireplace recited by claim 1 includes, inter alia, a lenticular screen comprising a lenticular lens layer and an image layer disposed on the lenticular lens layer to simulate a fire.

It is advantageous to configure a fireplace as recited by claim 1 because the lenticular screen can create depth and realism by providing a three-dimensional image for viewing. See the

present application at page 6, lines 2-6, 27, and 28. The lenticular screen does not rely upon reflection to create depth, but instead relies upon a plurality of lenticule that each function as a lens to magnify various strips of an image layer of the lenticular screen. As the position of the screen or view changes, different strips of the image layer are magnified, creating the appearance of depth and motion. Application, at page 7, lines 12-21. The creation of depth and realism therefore does not depend on any objects being placed in front of the lenticular screen to create the illusion of depth because reflection is not used.

As noted above, Hess discloses a flame simulating assembly. The screen 42 in Hess has a partially reflecting surface 44. See Hess, column 3, lines 58-60. Hess focuses on the use of reflection of an image off of screen 42 to generate depth. The creation of depth and realism is wholly dependent on the object that is placed in front of the screen 42, such as fuel bed 26.

For example, Hess states, "The screen 42 is positioned immediately behind the fuel bed 26 so that the fuel bed 26 will be reflected in the reflecting surface 44 to give the illusion of depth." Column 4, lines 1-3. Additionally, lighting is used to enhance reflection in the screen 42 (column 4, lines 8-11), further illustrating the importance Hess places on using reflection to create depth and flame realism.

As noted in the rejection, Hess does not disclose or suggest a lenticular screen, or the desirability of positioning a lenticular screen in a fireplace to simulate a fire, as recited by claim 1.

Morton discloses a lenticular screen. Morton does not suggest providing a fireplace including a lenticular screen comprising a lenticular lens layer and an image layer disposed on the lenticular lens layer to simulate a fire.

For at least the reasons provided below, the combination of Hess with Morton fails to render the rejected claims obvious under section 103.

A. There Is No Motivation to Combine Hess with Morton.

There is no motivation to combine Hess with Morton. Hess discloses a flame simulating apparatus including a surface that, through reflection, creates a simulation of depth. Hess does not disclose that other configurations or methods for the creation of depth would be desirable, or how such other configurations could be accommodated in the fireplace disclosed by Hess.

Morton simply discloses a lenticular screen and therefore does not suggest that it would be desirable to place such a lenticular screen in a fireplace to simulate a fire, or how such a combination could be accomplished.

Therefore, there is no motivation in either reference which would motivate one skilled in the art to combine the references.

The rejection provides the following as the stated motivation for combining Hess with Morton.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Hess et al to include the use of a lenticular screen with a movable image layer by a motion imparting device behind the front panel of his advantageous apparatus for image display as taught by Morton in order to protect the lenticular screen and image layer assembly from being damaged while increasing the number of images that can be displayed. . . .

It is important to note that one of ordinary skill in the art motivation to combine references does not have to come from either one of the prior arts of record as applicant seems to argue.

Office Action mailed March 11, 2003, at pages 3 and 5. However, it is unclear why motivation to "protect the lenticular screen and image layer assembly from being damaged" and "increasing the number of images that can be displayed" would provide motivation to combine Hess with Morton, as Hess does not suggest either improvement would be desirable or feasible. In fact, Hess does not even suggest that it would be desirable to utilize his flame simulating assembly in such a manner as to protect internal components from being damaged or to increase the number of images provided therein.

Regarding the Examiner's assertion that motivation does not need to come from either of the cited references, the Examiner's attention is respectfully directed to MPEP 2145(X)(C), which states that there must be some motivation, either in the references themselves or in the knowledge of one skilled in the art, to combine references. For at least the reasons stated above, in the present case neither the references nor ordinary skill in the art provide such motivation.

B. The Combination of Hess with Morton is Based on Impermissible Hindsight.

A combination of references in a section 103 rejection cannot be based on hindsight. MPEP 2145(X)(A). In other words, it is improper for the Examiner to use a pending claim as a template to assemble various references in a section 103 rejection. Id.

In the present application, the Examiner has failed to identify any motivation to combine the cited references. Instead, it appears that the Examiner is impermissibly using the claims to assemble the references.

For example, during the interview the Examiner questioned whether the lenticular screen disclosed by Morton would work in the fire simulating assembly disclosed in Hess. Regardless of the propriety of such a question, such a query misses the point and illustrates how impermissible hindsight is being used. Instead of asking whether such a combination could be made, the correct inquiry is whether one skilled in the art at the time of application would have been motivated to make such a combination. Neither reference nor ordinary skill in the art at the time of application provides such a motivation.

C. The Configuration Disclosed by Hess Teaches Away From the Use of a Lenticular Screen as Disclosed by Morton.

The configuration disclosed by Hess teaches away from the lenticular screen disclosed by Morton. Hess solves the problem of flame simulation in a fireplace through reflection of objects off of a reflecting surface to create an appearance of depth. Hess, column 4, lines 1-3. Hess therefore requires at least some distance between the objects and the reflecting surface in order to create the simulation of such depth.

In contrast, Morton discloses a lenticular screen for displaying an image. Morton, abstract. The lenticular screen does not utilize reflection of an object off of a surface to simulate depth, but instead uses a plurality of lenticule to magnify various strips of an image layer of the lenticular screen to create the appearance of depth and motion.

Therefore, Hess discloses use of reflection to create depth, which teaches away from the use of a lenticular screen as disclosed by Morton, since a lenticular screen simulates depth not through reflection but through a plurality of lenticule.

D. Embodiments Made In Accordance with the Present Invention have Been Recognized By the Industry as Innovative.

The Silhouette electric fireplace is manufactured by Heatilator, a wholly-owned subsidiary of the owner of the present application. The Silhouette is manufactured in accordance with features of the present invention and includes a fireplace with a front panel and a lenticular screen viewable through the front panel to simulate a fire.

The Silhouette has been recognized by the industry for its innovation. Specifically, the Silhouette was a winner at the 3rd Annual Vesta Awards held on March 7, 2003 at the HPBA Expo in Nashville Tennessee in the category for "Electric Fireplaces, Stoves & Logs." Attached hereto is an article recognizing the award won by the Silhouette.

Recognition of innovation by the industry should be considered as objective indicia of the nonobviousness of the claimed invention. See, e.g., MPEP 716.03(a) (dealing with commercial success an indicia of nonobviousness). Therefore, recognition of the Silhouette illustrates the nonobviousness of claim 1 of the present application.

For the above reasons, reconsideration and allowance of claim 1, as well as claims 2-7 that depend therefrom, is respectfully requested.

Claim 12 depends from claim 11. Although not identical in scope to either of claim 1 or claim 11, claim 12 should be allowable for at least the reasons provided above with respect to claims 1 and 11. Reconsideration and allowance are requested.

Claim 16 depends from claim 15. Although not identical in scope to either of claim 1 or claim 15, claim 16 should be allowable for at least the reasons provided above with respect to claims 1 and 15. Reconsideration and allowance are requested.

Claim 18 recites a method for simulating a fire within an enclosure including a lenticular screen. Although not identical in scope to claim 1, claim 18 should be allowable for at least the same reasons provided above with respect to claim 1. Reconsideration and allowance are requested.

Regarding to claim 19, it is once again respectfully noted that claim 19 does not recite a lenticular screen, but instead recites a method for simulating flames including reflecting light off of a moveable bobble-flame to generate an image of a flickering flame. For at least the same

reasons as provided above with respect to claim 11, claim 19 should be allowable.
Reconsideration and allowance are respectfully requested.

IV. Allowable Subject Matter


In section 5 of the Office Action, claim 13 was noted as being allowable, and claims 8-10, 17, and 20 were noted as being allowed. Applicants appreciate the Examiner's identification of allowable subject matter, and suggest that all claims are in condition for allowance.

V. Conclusion

In view of the above remarks, claims 1-20 are now in condition for allowance.
Reconsideration and allowance are respectfully requested. The Examiner is encouraged to contact the undersigned attorney with any questions regarding this application.

Respectfully submitted,
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Date: September 11, 2003

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Attachment: Appendix

APPENDIX

Attached hereto is an excerpt from an article written by Richard Wright, entitled "Quadra-Fire and Earthfire USA receive top honors at the 3rd Annual Vest Awards held on March 7 at HPBA Expo in Nashville, Tennessee," from Hearth & Home, April 2003, page 24.